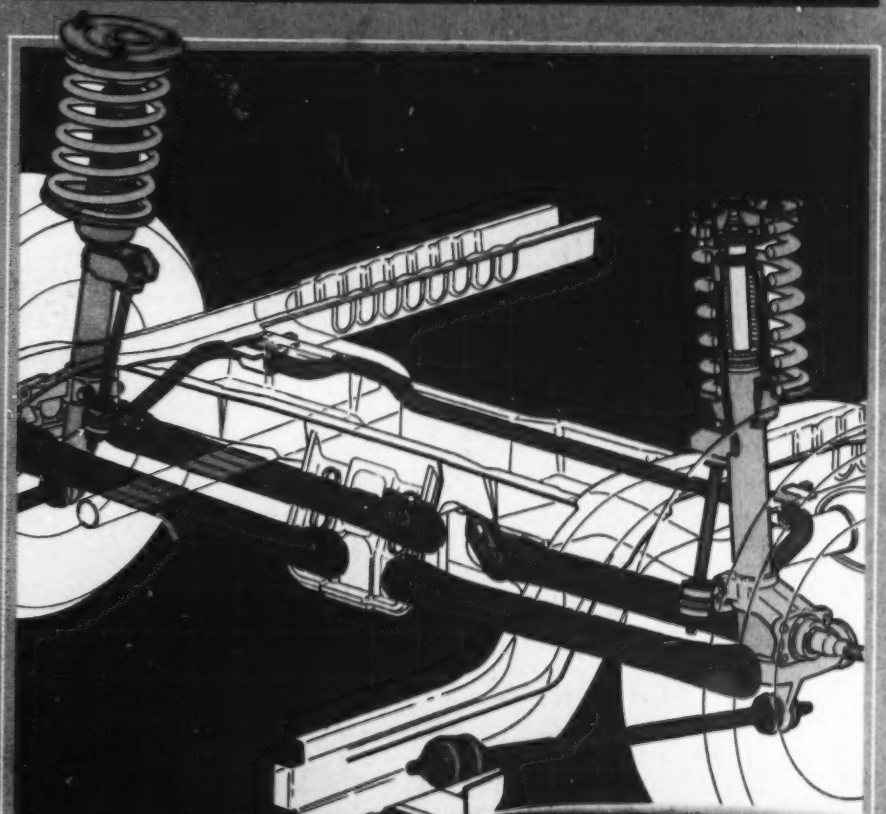
C2150-3

CHILTON'S 3/1985

AUTOMOTIVE INDUSTRIES

NUMBER ONE IN THE INDUSTRY SINCE 1895



'86 TAURUS

Ford Takes The Bull By The Horns

The Japanese In America

Sidestepping The Restraints

Design Trends

JOS MC NALLY, SRI ACO EDITOR
CONGRESSIONAL INFO SERVICE
4520 EAST-WEST HWY, SUITE 800
BETHESDA MD 20814
(COPY #1)

AUTOMOTIVE INDUSTRIES

March, 1985/Volume 165, Number 3

FEATURES

26 Japanese In America: Building An Empire
Forget the quotas. Even if they remain at 1984 levels, the Japanese are ready to increase their US market share 50% by 1990

35 Large US Suppliers Confident
AI asks executives at large, US auto suppliers if they're ready for the Japanese supplier invasion.

39 '86 Taurus: Ford Takes The Bull By The Horns
Are these cars really going to replace the LTD/Marquis? YUP.

44 Renault Pursues Electronique Prowess
Renault is emerging as a major electronics manufacturer in its own right. Its long-term research points the way past the talking car to one that listens.

47 Design: Psst...The Windswept Look Is In!
AI talks to Destroit's best in the design dodge.

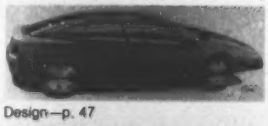
55 CPC Supergroup's Single-Source Strategy
Parts sourcing for GM's new Chevrolet-Pontiac-Canada group is changing as radically as the General itself.

57 Vari-Turbo Packs A Wallop
Mitsubishi's variable geometry turbocharger nets significant power and efficiency gains.

63 Perkins: Building Heads With Few Hands
Perkins reveals a $1.12 million flexible automatic assembly line for cylinder heads.

Ford Taurus—p. 39

Renault Electronics—p. 44



Design—p. 47

CPC Buying—p. 55

Saturn—p. 8

NEWS & DEPARTMENTS

5 Editorial: No One Should Pay More
8 Detroit: All Systems Go On Saturn
13 Letters: Who Builds Cars Best?
14 Newsline: Mazda's Plan
16 Marketdata: Ford's Bull
20 News: Porsche's Schutz Reveals US Marketing Plans
72 Technolog: Bearings
77 Business: Two-Seater Market
78 AIAG: Just-In-Time A Winner
79 New Products
80 Technical Literature

COVER

Ford's radical new project Taurus is featured this month. The car is the Mercury version, the Sable.

NEXT MONTH

April brings specs galore, plus *AI's* own report card on the industry, our 1985 Total Car Coefficient and more.

QUOTABLE

"A Porsche is like a mink coat, which is there to not necessarily keep a woman warm, but quiet."—Peter Schutz, president and CEO of Porsche AG, on why the recent change in US federal tax laws limiting business writeoffs for automobiles shouldn't hurt Porsche sales.

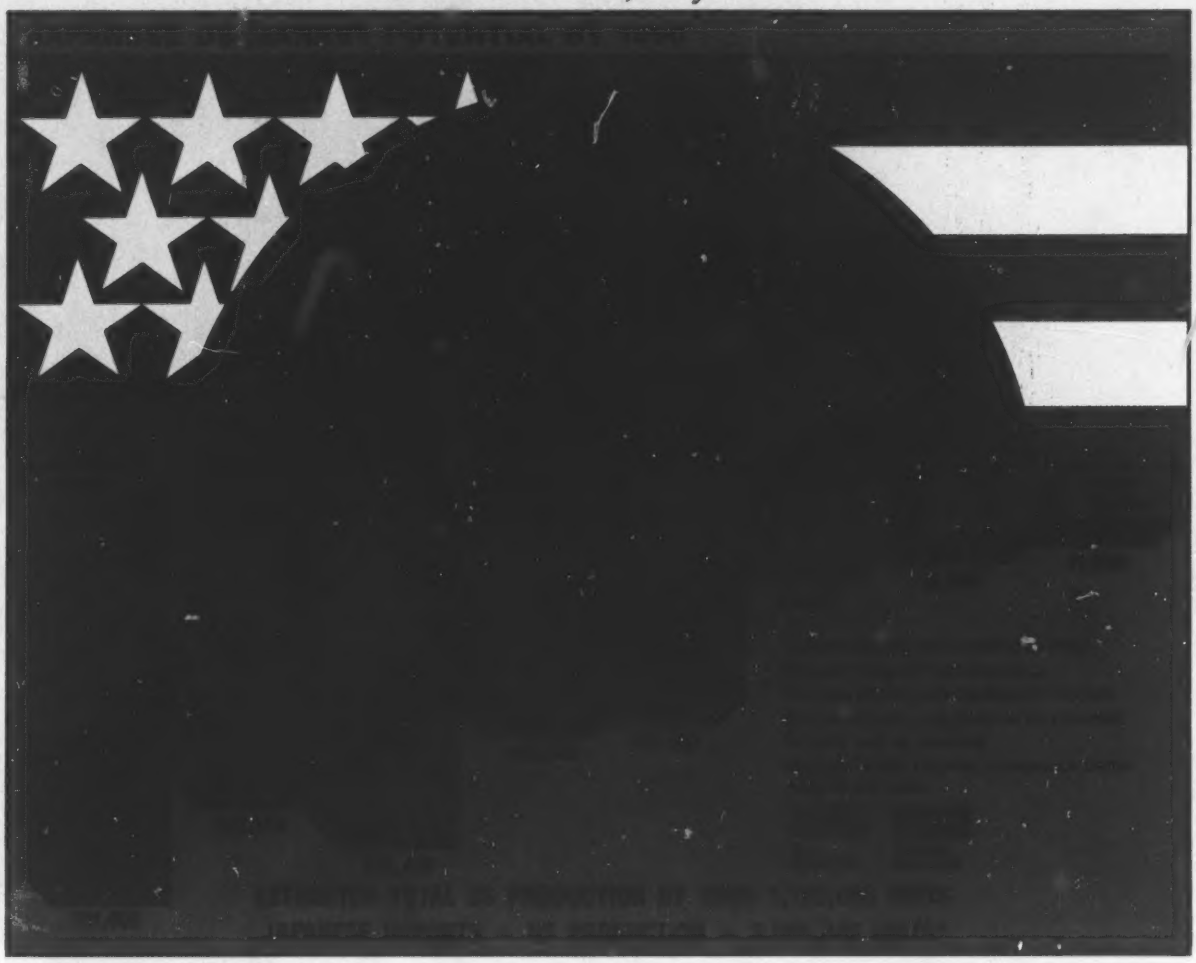
"I think Americans realize they're mortgaging their kids' future now. Our jobs are going overseas like never before. We're fast becoming a colony again. In spite of our recent prosperity, we're going to have to come down to earth sometime soon."—Chrysler chairman Lee A. Iacocca.

AUTOMOTIVE INDUSTRIES (ISSN 0273-656x) magazine is published monthly by Chilton Co., Chilton Way, Radnor, PA 19089. Chilton Company is a division of American Broadcasting Companies Inc., New York, NY. Subscription rates and single copy prices on request. Second Class Postage paid at Wayne, PA 19087 and additional mailing offices. POSTMASTER: Send address changes to AUTOMOTIVE INDUSTRIES, P.O. Box 1441, Riverton, NJ 08077. _Chilton Company, 1985. Permission to photocopy for internal use or the internal use of specific clients is granted by Chilton Company for libraries and other users registered with the Copyright Clearance Center (CCC), provided that the base fee of $1.00 per copy of the article, plus 25¢ per page is paid directly to the CCC, 21 Congress St., Salem, MA 01970. Special requests should be addressed to The Editor. (0273-656x/85 $1.00 + 25¢)

ONE OF THE ABC PUBLISHING COMPANIES

BUILDING AN AMERICAN EMPIRE

Forget the Quotas. Even if import restraints remain at today's levels, Japanese automakers will be able to increase their US market share 50% by 1990.



Japanese in America 1990 market potential: a conservative estimate of the total cars Japanese automakers could sell in the US by 1990 shows they could boost their market penetration over 50%. This chart is based on the 1984 voluntary import restraint agreement remaining in effect at the current level: 1,850,000 cars plus 90,849 commercial wagons and vans. Toyota's projected US production does not include NUMMI.

by John McElroy

Forecasting can be risky business. Especially if you're trying to guess what will unfold five years from now. But sometimes you can paint a fairly accurate picture simply compiling what different companies say they will do, then analyzing what actions that will force others to take.

Using this logic, it seems safe to say the Japanese automakers will be building over 1 million cars in the United States by 1990. And when that's added to the cars they're able to import from Japan under the Voluntary Restraint Agreement (VRA), they'll have a total of 3 million cars to sell here. If this volume were available today, for example, the Japanese automakers would capture 29% of the American car market.

Should this scenario unfold, the advent of Japanese production in the United States is bound to have a dramatic impact on the domestic automakers, their suppliers and the UAW. For the American car companies, it will provide intense pressure to become more competitive or risk the certain loss of more market share. The supplier industry will be tightly squeezed as Japanese suppliers follow their parent companies into this mar-

ket and look for increased business by selling components to American automakers. And the UAW will have its hands full just trying to organize the workers at these assembly and supplier plants.

Empire Building: Japanese US Auto Production
(thousands of units)

1983	1984	1985E	1986E	1987E	1988E	1990E
50	134	250	470	670	900	900

Source: Daiwa Securities Co., Ltd.

Keeping The Quotas

The question weighing on everyone's mind in Detroit these days is whether the VRA, or some form of "gentlemen's agreement" will continue to restrict the number of Japanese imports. And if so, at what level and for how long? Though the answer may come out before this issue does, *Automotive Industries* contacted the Secretary of Commerce, Malcolm Baldrige, to get a reading of how he is currently leaning. Though he never came out and directly stated that quotas should continue, he left no doubt that he believes the domestic industry is still not as strong as it should be.

"Yes, the US auto industry has recovered from the 1980-82 recession," Baldrige said. But he added, "the companies are not yet completely healthy."

Baldrige pointed out that working capital towards the end of 1984 was still $3.3 billion short of what it was at the end of 1978. And though the companies' leverage has improved, their debt to equity ratio is still higher than it was then.

"These factors, coupled with heightened foreign competition, are an indication that the companies' financial strength has not been fully restored to 1978 levels," Baldrige said. "We will be evaluating these factors as we analyze the need for continued restraint."

Based on Baldrige's response, it seems likely that there will be pressure from Washington to continue the quotas. However, many industry observers believe the anti-protectionist Reagan Administration could allow the formal Voluntary Restraint Agreement to lapse and replace it with an informal "gentlemen's agreement" that would achieve the same purpose. Presently, the VRA limits Japanese imports to 1.85 million cars plus another 90,800 commercial station wagons and vans. But some observers think that some modest quota increase is possible, particularly for Isuzu and Suzuki.

US Trade Representative William Brock at presstime had reportedly indicated he continues "to question the value of the restraints."

Who's Here, Who's Coming

But even if the VRA continues, the Japanese automakers have plans in place to increase their market share in the United States by making cars here. Honda already has the capacity to build 150,000 cars a year in Ohio and has announced plans to double that. Nissan will start building Sentras this month in Tennessee with the capability of making 100,000 cars a year. Mazda has begun to construct a plant in Michigan that will make 240,000 cars a year, with some of that production being sold to Ford. And these actions are likely to spur others to do the same.

"The Japanese automakers are caught in a game that's called 'Don't let Congress get you,' " says Jim Harbour, a manufacturing consultant in Berkley, MI. "With the quotas in place, they've got to build cars here if they want to increase their market share.

"But look what happens. Let's say I'm Toyota and I'm the number one Japanese car company in the market here. Then I look over my shoulder and I see that Nissan has just added 100,000 cars on top of its quotas. That's going to make them number one. But Honda is going to pass us both because they've just added 300,000 cars. So if I'm Toyota and I want to stay number one and increase my market share, I've got to put a plant here."

"The same goes for Mitsubishi," Harbour explains. "There's no way they can let Mazda pull away from them. So they've got to put a plant here, too. But since they don't have enough market share yet to justify the volume, they'll sell part of their production to Chrysler, just like Mazda is going to do with Ford. Before it's all over, the Japanese will be building 1 million units in the US."

Harbour's assertion is backed up by Yoshihide Kondo, analyst for Daiwa Securities in Tokyo, Japan. Kondo agrees that both Mitsubishi and Toyota will build cars in the US, adding, "Toyota may take over the [NUMMI] joint venture. Otherwise, Toyota will start car assembly at the second plant in addition to the joint venture."

According to Kondo's own estimates, which are very close to *AI's* (see chart), the Japanese will be able to sell 2,840,000 cars in the US by 1990, with the split going 1.94 million imports, and 900,000 local production. And that's assuming that the VRA remains at its 1984 levels and that domestic content legislation is not enacted.

Supplier Squeeze

This large base of American-made Japanese cars will represent lost opportunities for the US supplier industry, according to several auto analysts. Not only will these American-made cars continue to use a high percentage of parts imported from Japan, but over 30 Japanese suppliers have already followed the Japanese automakers to the United States. And this trend is sure to increase, especially if Toyota and Mitsubishi add assembly plants here.

"As a rule, the Japanese automakers don't deal with American parts producers," says Maryann Keller, an analyst with Vilas Fisher. "By and large they prefer to deal with companies in which they have a vested interest. Most Japanese parts producers are affiliated with one or several auto companies. And once these parts producers gain a foot-hold here they will certainly go after business that is presently controlled by US-owned companies.

"And the American auto companies will welcome that because they

(Continued)

will get better prices," Keller adds. "These auto companies want all the protection in the world, but when it comes to protecting their suppliers, that's the last thing they want. And the American parts industry is not really in a position to do much to protect itself because it is very fragmented and their main customers are against them. They have no spokesgroups, and they certainly have no one in the management of these companies who is visible enough to gain national voice."

Many US suppliers with international experience are reacting to these competitive pressures. But often this means they too are looking for offshore sources to lower their prices. That means the smaller suppliers will come under even greater pressure.

"The suppliers, taken in general, do not have very good international experience. They just don't tend to plan strategically the way offshore suppliers do," says Martin Anderson, a consultant in Cambridge, MA. "They're in for a pretty rude awakening, not just from the Japanese suppliers moving here but also with the European component suppliers gaining inroads selling to all producers here."

In 1981, Japanese car and truck manufacturers projected their OE purchases from American suppliers would reach $300 million, but they still haven't reached even half of that figure. Presently, the United States is running a trade deficit of nearly $3 billion with Japan for OE and aftermarket automotive parts and accessories.

To counter this discrepancy, the Japanese automakers cite the domestic content of the vehicles they build here as evidence of their good corporate citizenship. But much of this information is seriously misleading. For example, Nissan states that 42% of each pickup truck it produces at Smyrna, TN consists of domestic content. But they count the labor of their American workers as part of that domestic content. And the American-based Japanese suppliers that supply Nissan are counted towards domestic content, too. Yet, *Automotive Industries* has found three Japanese suppliers—American Yazaki, Chuo-Yuka and Idemitsu Apollo—that Nissan counts towards domestic content even though these companies don't have manufacturing operations in the US. They only import products that are packaged here. But Nissan counts them as domestic suppliers because of that American value added through handling!

This influx of Japanese suppliers seems to have sounded some sort of alarm in Washington, though it's hard to say what, if anything, may come of it.

"While a significant number of domestic companies now supply the US assembly plants of Japanese producers, our parts industry is concerned that the majority of this business will continue to be served by Japanese parts manufacturers producing in the United States and Japan," says Malcolm Baldrige. "The US government does not oppose this investment, but we are aware of industry complaints of tied or informal arrangements between Japanese auto assembly facilities and Japanese parts suppliers in the United States. We are concerned that such arrangements may not allow sufficient competitive opportuni-

US Production of Parts and Accessories by Japanese-Affiliated Companies

Company	Parent & Group	Plant Location	Product Line	Customers
American Yazaki	Yazaki Corp.	El Paso, TX (Juarez, Mex.)	Wiring Harness	Nissan, Ford
Bellemar Parts Industries Inc.	Honda Motor Co. Sankei Giken Kogyo Co. Tokyo Seat Co. (Honda Group Cos.)	Marysville, OH	Seat assemblies, exhaust systems, catalytic converters, brake lines, wheels and door sashes	Honda of America Mfg.
Bridgestone Tire Mfg. (USA) Inc.	Bridgestone Corp.	LaVergne, TN	Radial tires for heavy-duty trucks and buses. Production of car tires under consideration	Replacement market
Calsonic Inc.	Nihon Radiator Co. (Nissan Group)	Irvine, CA	Air conditioning systems	Nissan Motor Corp. USA
Calsonic Mfg. Corp.	Nihon Radiator Co. (Nissan Group)	Shelbyville, TN	Air conditioning systems and exhaust assemblies	Nissan Motor Corp. USA
Cast Forge Co.	Nippon Light Metal Co. Kelsey-Hayes Co.	Howell, MI	Aluminum wheels, transmission component parts and engine parts	OE supplier
Chuo-Yuka USA	Chuo-Yuka	Pittsburgh, PA	Antifreeze, brake fluid, solvents	Nissan Motor Mfg.
Clarion Corp. of America	Clarion Co. Ltd. (Nissan Group)	Lawndale, CA Nashville, TN	Radio combinations	Chrysler Corp. & Nissan Motor Corp.
Curtis-Maruyasu America Inc.	Maruyasu Ind. Co. Curtis Products Inc. (Toyota Group)	Tracy, CA	Fuel line and hydraulic brake assemblies	NUMMI
Eaton Auto Prod. Mfg. Inc.	Nihon Plast Co. Ltd. (Nissan Group)	Eaton, OH	Steering wheels	Honda of America Mfg.
Fuji Koki America	Fuji Koki Mfg. Co.	Dallas, TX	Expansion valves for air conditioning systems	OE supplier
Hi-Lex Corp.	Nippon Cable Systems	Battle Creek, MI	Control cables for accelerators, clutches hood and trunk release mechanisms, gas filler lids and brakes	GM, Ford, Chrysler IH, Nissan Motor Mfg.
Hitachi America Ltd.	Hitachi Ltd.	Lexington, KY	Electronic sensors, actuator modules, engine management systems	Nissan, other OEM's
Idemitsu Apollo	Idemitsu	Cincinnati, OH	Lubricants	Nissan Motor Mfg.
Izumi Corp.	Izumi Motor Co. Ltd.	Yaphank, NY	Steering wheels and horn pad assemblies	Chrysler, Nissan Motor Mfg., Ford

ties for traditional US manufacturers, especially in those areas where excess US capacity exists."

Despite the influx of Japanese suppliers along with Japanese automakers, the employment outlook for American workers may not be as bright as it first appears. From the UAW's viewpoint, any amount of new jobs are better than none. Yet, as the union has seen at Honda's and Nissan's American plants, it cannot automatically count on representing these workers. And because at least half the components used at these plants will continue to be imported, there will be fewer workers to represent, anyway.

"For every job in assembly, stamping and machining at the Ford Motor Co., there are two jobs done outside at Bendix, Dana, Eaton, Budd and thousands of smaller suppliers," says Dan Luria, a senior researcher at the Industrial Technology Institute in Ann Arbor, MI and currently on leave from the UAW research dept. "The same is true for the Japanese companies that build assembly plants here, but the question is, 'Where will those jobs be?' For the American companies, 95% of those jobs will be in the US. But in the case of the Japanese plants built here, 60% of those jobs will still be in Japan. There's about a 30% employment penalty for American workers."

US Production of Parts and Accessories by Japanese-Affiliated Companies

Company	Parent & Group	Plant Location	Product Line	Customers
ATH Parts Ind. Inc.	Kiluchi Press Kogyo Co. Takao Kinzoku Kogyo Co. Hirata Press Kogyo Co. Hongo Seisakusho Co. (Honda Group Cos.)	St. Paris, OH	Stamped and welded internal structural components	Honda of Amer..a Mfg.
Kantus Corp.	Kanto Seiki Co. Ltd. (Nissan Group)	Lewisburg, TN	Plastic instrument panels, radiator grilles, console boxes and front bumpers	Nissan Motor Mfg.
Musland-Hayashi	Hayashi Telempu	Livermore, CA	Carpet	NUMMI
Musashi USA Inc.	Musheshi Precision Industry Co. Ltd.	Battlecreek, MI	Arm bushing and joint assemblies	Ford Motor Co.
NGK Spark Plug Mfg. (USA Inc.)	NGK Spark Plug Co.	Irvine, CA	Spark plugs	replacement market for Japanese-made cars
NOK Inc.	Nippon Oil Seal Industry Co. Ltd.	LaGrange, GA	Oil and mechanical seals	GM, Ford, Chrysler, AMC, IH
Nippondenso of Los Angeles Inc.	Nippondenso Co. Ltd. (Toyota Group)	Long Beach, CA	Air conditioning systems	OE contract with NUMMI. Systems for Toyota and Honda sold here.
Nippondenso Sales Inc.	Nippondenso Co. Ltd. (Toyota Group)	Battle Creek, MI	Windshield washers and heaters	Honda of America
North American Lighting	Koito Mfg. Co. Ltd. Westfalische Metall Industries AG (Toyota Group)	Flora, IL	Front and park lamps, rear combination lamp assemblies, for lamps and license-plate lamps	Nissan Motor Mfg., BMW of North America, Volkswagen of America, Ford, GM and AMC
Sanden International (USA) Inc.	Sanden Corp.	Dallas, TX	Air conditioner compressors	OE and aftermarket
Stanley Electric US Co. Inc.	Stanley Electric Co. Ltd. (Honda Group)	London, OH	Front and rear combination lamps	Honda of America Mfg.
Topy Industries Inc.	Nippon Steel	Frankfort, KY	Car and truck wheels	Nissan Motor Mfg. and OE
Toyota Motor Mfg. USA Inc.	Toyota Motor Corp.	Long Beach, CA	Cargo beds for pickup trucks	Toyota Motor Sales USA
Tri-Con Industries Ltd.	Tokyo Seat Co. Ltd. (Honda Group)	Columbia, MO	Car seats	Chrysler
Viam Manufacturing	Japan Vilene Co. Ltd. Dainippon Ink & Chemicals Inc.	Santa Fe Springs, CA	Floor mats	OE and replacement markets
Warner-Ishi Corp.	Ishikawajima-Harima Heavy Industries Co. Ltd., Borg-Warner Corp.	Shelbyville, IL	Turbocharger housings	OE and aftermarket
Wynn-Kiki Inc.	Diesel Kiki Co. Ltd. Wynn Industries, Inc.	Fort Worth, TX	Air conditioner compressors	OE market

Making Cars In America

Many people in the US auto industry relish the prospect of Japanese production in America. They believe that once the Japanese automakers build plants here, the UAW, the EPA and OSHA will provide 'a level playing field' that will destroy the Japanese competitive advantage. But others are not so certain.

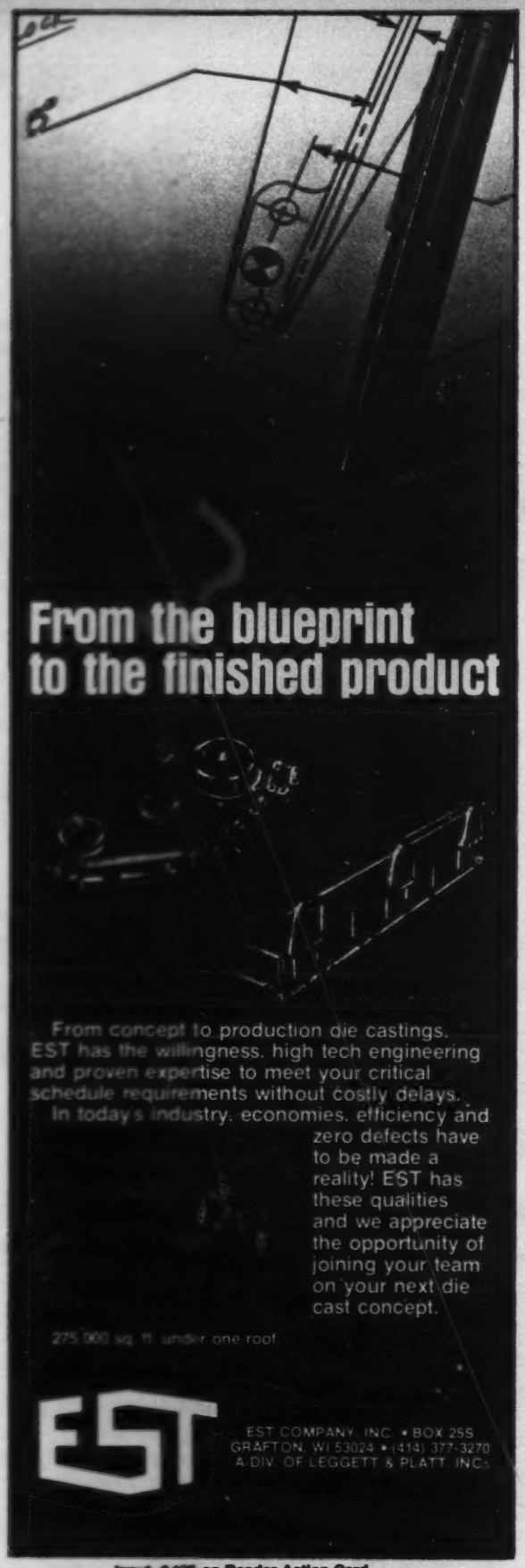
"The EPA and OSHA may be strict, but they're predictable," says Martin Anderson. "The Japanese sell to 100 different nations, and a lot of their governments are not predictable. You do the wrong thing and your boat may sit in the harbor for six months. The Japanese and their suppliers are quite adept at dealing with these challenges. So if somebody is sitting around here thinking the EPA or OSHA are going to be a barrier, they've just made the wrong assessment."

And one question the US automakers have not yet answered satisfactorily is why the Japanese would build compacts and subcompacts in the American market. While the American companies claim they can't build small cars profitably and must source them from Japan and Korea, these are the very cars that the Japanese are building here today.

Part of the answer can be explained by the number of components that are imported from Japan. Another part can probably be attributed to the lack of a union at Nissan's and Honda's plants. But NUMMI is represented by the UAW and Mazda's US assembly plant will be, too. So how do they do it?

"When the Japanese come into the US, they're able to hire an all-new workforce," Jim Harbour explains. "So their pension costs aren't that much of a burden and probably won't be for several decades to come. Plus, they're able to substitute HMO plans for an expensive Blue Cross package.

(Continued)


From the blueprint
to the finished product
From concept to production die castings. EST has the willingness, high tech engineering and proven expertise to meet your critical schedule requirements without costly delays.
In today's industry, economies, efficiency and zero defects have to be made a reality! EST has these qualities and we appreciate the opportunity of joining your team on your next die cast concept.
275,000 sq. ft. under one roof
EST
EST COMPANY, INC. • BOX 255
GRAFTON, WI 53024 • (414) 377-3270
A DIV. OF LEGGETT & PLATT, INC.
Input #185 on Reader Action Card

Japanese in America

And they don't carry any COLA [cost of living allowance] costs. Now, the line worker in one of those Japanese plants still earns the same as somebody in an American plant. But he has one-third the fringe cost. So even though the take-home pay is the same, the labor cost is $5 to $6 an hour less.

"But it goes deeper than that," Harbour adds. "The Japanese have shown that they can build a car here with fewer man-hours of labor than we can. And when you couple their efficiency with their lower labor costs and the parts they bring in from Japan, they can still build a car here for $1500 to $1700 cheaper than any American car company."

The Big Chill

The 50% increase in cars that the Japanese automakers will be able to sell in the US by 1990 will undoubtedly pose a strong challenge to the American automakers. They will be forced to become more competitive or see their market position erode. And though efforts such as GM's Saturn Corporation are likely to meet the challenge by then, you just know the Japanese aren't sitting still.

But the big move on the American market could ultimately hurt the Japanese as well as everyone else that wants to sell cars here.

"I don't think the US market is going to grow fast enough to support the combination of incremental capacity additions from US companies, the million units that you see coming from the Japanese companies and the attention that the Europeans, the Koreans and the Mexicans are giving us," observes Maryann Keller.

"What are you going to do with all of them? Is that going to be the kind of market where profit margins are as high as they are now? That's very unlikely. We could see the same thing develop that's going on in Japan right now, which is that nobody makes any money because of all the fierce competition." ■

Reported by the author, Leo Abruzzese in Washington, and Lance Ealey.

Single copies of this article are free.
Input #501 on Reader Action Card.
For reprint information contact AUTOMOTIVE INDUSTRIES, Radnor, PA 19089.